

**RV Ocean Veritas Data Summary  
Deepwater Horizon Oil Spill  
Cruise 6/27/2010**

Review Date 6/28/10

**Summary:**

This sampling report presents data collected from the RV Ocean Veritas for the period of 6/27/2010. The RV Ocean Veritas will alternate with the Brooks McCall in the collection of subsurface data associated with the Deepwater Horizon oil spill. The sampling plan for the day was to continue to characterize the distribution of subsurface hydrocarbons to the southwest of the wellhead. Stations occupied during this reporting period include OV068, OV069, OV070, OV071 and OV072. A total of 5 CTD casts were completed on 6/27/2010.

The Ocean Veritas provided the following definition to provide terminology on how subsurface oil is referred to:

*Oil Plume:* concentrations of hydrocarbons (above background) detected in the water column via fluorometry and LISST particle analysis that appears to be part of a larger pattern of dissolved oil, naturally dispersed oil and/or chemically dispersed oil.

The CTD array data showed fluorescence signals at Stations OV068, OV069, OV070 and OV071. No fluorescence signals were detected at Station OV072.

A total of 11,982 gallons of subsurface dispersant were used on 6/27/2010. The average injection rate was approximately 8.3 gallons/minute.

The results for Rototox samples OV063, OV064 and OV066 collected on 6/26/2010 did not indicate any significant mortality and control survivability was good. Rototox samples were collected from Stations OV068, OV069 and OV072 on 6/27/2010. Results will be available tomorrow.

**CTD Fluorometry & Dissolved Oxygen:**

Station OV068, which was intended to delineate the southern edge of the plume, was located 5 km south-southwest of the wellhead. This station showed a fluorescence signal at 1225 meters. A drop in dissolved oxygen was present at 1000 meters. Station OV069, which was intended to define the northern edge of the plume, was located approximately 4 km north-northwest of OV068. This station detected two fluorescence signals at 1050-1125 meters and 1200 meters. No drops in dissolved oxygen were associated with the plume. Station OV070 was a repeat sample of OV069. OV070 was taken to be a comparison of the two fluorometers. No water samples were collected at OV070. Fluorescence signals were detected from 1075-1100 meters and from 1160-1210 meters. No associated drops in dissolved oxygen were observed. Station OV071, located approximately 5 km southwest of the wellhead, detected a fluorescence signal

from 1200-1215 meters. A drop in dissolved oxygen was observed at 960 meters. Station OV072 was located 6 km southwest of the wellhead. No fluorescence signal was detected; however, there was a dissolved oxygen reduction from 940-980 meters.

**LISST Data:**

LISST data was collected at the five sampled stations. The LISST data indicated that small droplets were not present in any of the areas sampled today.

**Toxicity Testing (Rototox Assay) (data collected from 6/27):**

The results for Rototox samples OV063, OV064 and OV066 collected on 6/26/2010 did not indicate any significant mortality and control survivability was good. Rototox samples were collected from Stations OV068, OV069 and OV072 on 6/27/2010. Results will be available tomorrow.

**Chemical Analyses (TPH and VOCs) (data collected from 6/27):**

Forty (40) samples were collected for TPH analysis and forty (40) samples were collected for VOC analysis. No data were provided for review at this time due to laboratory lag time.

**Problems/Operation issues:**

There was discussion today between various organizations dealing with data management over how to label samples being collected on this cruise. In brief, the Entrix sampling team on board was trained to use the protocols published in "Standard Operating Procedure Sample Management Program (MC252-SOP-03)" prepared by Environmental Standards and dated June 13, 2010. The naming protocols in that document are different than the naming protocols in the "Guidance for Shipboard Data Management Coordinator: Data Format and Transmission Specifications" prepared by the Subsurface Monitoring Unit and updated June 22, 2010 (Version 2.3). This difference was not discovered until the end of the day yesterday. While no formal decision concerning a permanent change in the naming convention has been agreed to, for the three days of this cruise the Entrix bottle numbers are being reported. Otherwise, several hundred bottles would require relabeling. A final decision on protocols to be used in the future will be made prior to the departure of the R/V Brooks McCall from Port Fourchon on the evening of June 27, 2010.

# Mississippi Canyon 252, Gulf of Mexico

R/V Ocean Veritas  
Sampling Effort

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